

10/541365

Received 24 November, 2004

A M E N D M E N T JC20 Rec'd PCT/PTO 06 JUL 2005

(Amendment under the provisions of Art. 11 of the Law)

To: Examiner of the Patent Office

Mr. Shinpei YAMAMOTO

## 1. Identification of the International Application

PCT/JP03/01787

## 2. Applicant

Name : NITTO KOHKI CO., LTD.

Address: 9-4, Nakaikegami 2-chome, Ohta-ku, Tokyo  
146-8555 Japan

Country of nationality : JAPAN

Country of residence : JAPAN

### 3. Agent

Name : (8970) SHAMOTO, Ichio, Patent Attorney

Address: YUASA AND HARA, Section 206, New Ohtemachi  
Bldg., 2-1, Ohtemachi 2-chome, Chiyoda-ku,  
Tokyo 100-0004 JAPAN

4. Item to be Amended

## Claims

### 5. Subject Matter of Amendment

Claims 1 deleted

Claim 2 was amended to independent form

6. List of Attachments:

Pages 36 and 37 of claim

## CLAIMS

1. (deleted)

2. (amended) A pipe coupling comprising:

a socket and a plug that have an appropriate lock  
5 mechanism and are detachably connected to each other;

said socket having a socket fluid passage that is  
opened or closed with a ball valve incorporated therein,  
said socket fluid passage having a primary fluid passage  
portion through which a fluid is supplied into said socket,

10 said primary fluid passage portion being provided therein  
with a cylindrical seal member in pressure contact with  
said ball valve to seal between said ball valve and an  
inner wall of said socket fluid passage, and said ball  
valve being rotatable to open when said socket and said  
15 plug are locked to each other by said lock mechanism;

wherein said ball valve is provided with a sub-valve  
bore that allows the fluid in the primary fluid passage  
portion of said socket fluid passage to be delivered to a  
secondary fluid passage portion of said socket fluid  
20 passage through said ball valve before a valve bore of  
said ball valve opens into said socket fluid passage when  
said ball valve is rotated;

wherein the secondary fluid passage portion of said  
socket fluid passage is provided with a movable valve that  
25 retracts to open said secondary fluid passage portion when  
it is pushed by a distal end of said plug as inserted into  
said socket, and when said plug is removed from said  
socket, said movable valve advances to close said

secondary fluid passage portion;

    said ball valve having a ball rotating shaft to rotate it, said ball rotating shaft being formed with a purge passage having a purge inlet that opens into a 5 secondary space formed in said secondary fluid passage portion between said ball valve and said movable valve, said purge passage further having a purge outlet that opens outside said socket fluid passage, said purge outlet being capable of assuming either of two positions, i.e. 10 one where said purge outlet communicates with a fluid recovery passage provided in said socket, and another where it does not, according to a difference in rotation angle of said ball rotating shaft, wherein when the rotation angle of said ball rotating shaft coincides with 15 an angle at which the valve bore of said ball valve is open into said socket fluid passage, the purge outlet is not in communication with the fluid recovery passage, whereas when the rotation angle of said ball rotating shaft is such that the valve bore of the ball valve is not 20 open into said socket fluid passage, the purge outlet is in communication with the fluid recovery passage.

3. A pipe coupling according to claim 2, wherein a cylindrical seal member is disposed at a communicating opening of the fluid recovery passage that is communicable 25 with the purge outlet of the purge passage formed in said ball rotating shaft, said cylindrical seal member being in pressure contact with said ball rotating shaft to seal between said ball rotating shaft and an inner wall of the